

RECEIVED

NOV 13 1987

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

GROUP 150

In re the application of:

JEAN-YVES CHENARD ET AL

Serial No: 254,313

Group Art Unit: 153

Filed : APRIL 15, 1981

Examiner: V. HOKE

For : IMPROVEMENT IN THE STABILIZATION  
OF VINYL HALIDE POLYMERS

RESPONSE TO OFFICE ACTION OF  
SEPTEMBER 30, 1987

Commissioner of Patents and Trademarks  
Washington, DC 20231

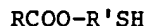
Sir:

In response to the official action dated September 30, 1987, applicant respectfully requests reconsideration by the Examiner of the Office's refusal to grant priority of Applicant's parent application Serial No. 070,503, filed August 28, 1979 under the provisions of 35 USC 120. The Board has refused to hear a request for reconsideration due to the inapplicability of 37 CFR 1.36(a) and our inability to file a request prior to July 25, 1987. Consequently, prosecution of the application has been reopened.

Applicant respectfully requests that such reconsideration be reviewed by the Examiner.

U.S. patent application Serial No. 070,503, Improvement in the Stabilization of Halovinyl Resins, broadly discloses and claims a resin stabilizer compound comprising in addition to a metal compound, an organic acid ester, in which the mercaptan function is joined to a carbon atom of the alcohol residue of the ester. Such compound acts to stabilize polyvinyl chloride or modified polyvinyl chloride.

These compounds can be represented by the general formula:



in which R is a linear or branched alkyl or alkenyl, aryl or aralkyl, containing at least two carbon atoms and preferably 6 to 38, and most preferably 8 to 18, the radical may also carry a second carboxylic group which may or may not be

combined with a second -R'SH group; R' designates a C<sub>2</sub> to C<sub>18</sub> alkylene, preferably C<sub>2</sub> to C<sub>6</sub>, this alkylene can also carry one or more -OH.

The products according to the invention comprise a genus of compounds carrying their mercapto group in the alcohol residue, that is in the R' chain.

The R radical in the esters, broadly discussed on page 4 of the specification for application Serial No. 70,503, can in practice comprise any aliphatic mono- or di-acid, the preferred esters are derived from fatty acids, particularly caprylic, perlargonic, capric, undecanoic, lauric, myristic, palmitic, stearic, isostearic or a mixture of such acids.

Excellent stabilizers are obtained by the addition of a mixture of palmitic and stearic esters of an alkylene mercaptan to a broad range of known tin stabilizers. Esters of aryl acids, (i.e. benzoic, benzylic, phenyl-acetic, phenyl-propionic, etc.) are also suitable.

The ester according to the invention can be a mono- or di-ester of a carboxylic di-acid. Suitable esters are (i.e., succinic, adipic, di-oleic, phthalic ester acids, etc.).

Page 4 of the specification in application Serial No. 254,313 further details the alcohol residue, which is a mercapto alcohol derived from various mono- or poly-alcohols carrying a thiol group.

The examples given are expressly stated as being non-limitative. In practice, mercapto ethyl esters and those of thioglyceryl are particularly suitable.

The addition of the genus of esters to a broad range of tin compounds permits a very substantial reduction in the quantity of tin to be used with respect to stabilization with tin compounds alone.

The specification also discloses use of the novel additive compound with other than tin-based stabilizers which give excellent results in the stabilization of halogeno-vinyl resins. Such systems are those derived from alkali-metals (sodium, potassium), alkaline earth metals (calcium, barium) and other metals, such as magnesium, zinc, antimony or their mixtures or with various other additives.

The new additives as contemplated and disclosed by the specification and claims can be incorporated in the resin after polymerization but before drying of the polymer or also at the time of use thereof.

Non-limitative examples are given on pages 7-21 of the specification.

Applicant's claimed and thoroughly disclosed invention relates broadly to the combination of known conventional organotin stabilizing agents with a carboxylic acid ester containing a mercaptan function in the alcohol residue thereof.

The Board has stated that applicant's disclosure in the parent application is not sufficient to illustrate that applicant was in possession of the generic concept to support the claimed subspecies in the CIP application. Consequently, no benefit of priority under 35 USC 120 was accorded.

While the proposition that failure to disclose the generic concept in a parent case will preclude a grant of priority in a CIP is well supported in the decisional law, applicant respectfully requests review of the facts of this case, in that the facts in this case illustrate that the broad genus of what is claimed in the CIP was clearly disclosed in the parent application and such claims are only a subspecies of the broad genus which was fully disclosed in the parent application (Serial No. 70,503). At the time of close of prosecution of Serial No. 70,503, there was agreement by the Patent Office that the application was in full compliance with 35 USC 112 in all respects.

As confirmation of this compliance, applicant has also submitted the evidence discussed hereinafter.

Applicant's invention does not relate to organotin stabilizers per se; rather, their invention relates to the proposition that performance of a broad range of known organotin stabilizers is enhanced by the use of a very specific kind of mercaptoester additive. This is seen, for example, from claim 59, which is structured as a Jepson-type claim.

Organotin halides have been well known stabilizers for vinyl halide resins, as demonstrated by the affidavit of Michel Foure, under 37 CFR 1.131 dated July 13, 1984 relating to his affidavit dated December 19, 1983.

Foure, opined, "that a reasonably skilled chemist familiar with the art and literature related to stabilization of PVC would know that a variety of organotin compounds in addition to the compounds specifically named could be used in combination with the described mercaptoesters" of Chenard et al (French Patent No. 2,434,835). Foure goes on, "It was my belief that halogen-containing organotin compounds could successfully be used in combination with the described mercaptoesters; my opinion in this respect was based on my familiarity with the work of Chenard et al and with the prior art...".

Foure illustrates that he is intimately familiar with the invention of Chenard et al relating to the use of certain mercaptoesters in conjunction with many known organotin compounds to stabilize PVC.

The declarations of Jean-Claude Mendelsohn and Jean-Yves Chenard, the inventors, are to the effect that they conceived and reduced to practice the broad idea of the generic invention described in French patent application No. 78,24863 filed August 29, 1978, that the generic invention is contained in the claims of their French patent application, and their conception of the invention relates to an improvement in the use of metal compounds to stabilize halogen-containing resins; the improvements involves addition of an ester

of a mercapto alcohol and a carboxylic acid. Their conception of the invention as it relates to organotin compounds embraces the field of useful organotin stabilizers and it was never their idea that certain types of organotin compounds such as the halogen-containing organotin compounds, which were in themselves known to be useful stabilizers, were to be excluded from the scope of their conception. Their conception of the scope of the invention included the obvious and well-known halogen substituted organotin stabilizers. The work done on their behalf by Michel Foure confirmed that their invention was indeed effective when the organotin compound contains halogen, the inventors were fully aware of the work conducted by Michel Foure in the United States in connection with the combination of halogen-containing organotin compounds and mercaptoesters, this work was done in close consultation with them and represents an embodiment of their invention as described in French patent application No. 78-24863 and described and claimed in the present application. These declarations by the applicants go specifically to the examiner's comments that there is no confirmation by the applicants that Dr. Foure had performed the work described on their behalf prior to the references' effective dates.

The affidavits of Philip E. Rakita and William A. Larkin are to the effect that it is their opinion that a chemist familiar with the use of organotin compounds as PVC stabilizers would recognize first, that the mercaptoesters could be used in conjunction with a large number of organotin PVC stabilizers to improve the performance of the stabilizer and, second, that the well-known halogen-containing organotin stabilizers are among the compounds with which the mercaptoesters can be used. They read the declaration of Michel Foure dated December 19, 1983 and are of the opinion that the experimental work described in that declaration

confirms the proposition that the mercaptoesters can be used to improve the stabilizing performance of halogen-containing organotin compounds and further, that any chemist familiar with the art of PVC stabilization who is acquainted with Chenard et al French Patent No. 2,434,835 and the experimental work described in the declaration of Michel Foure would know that the halogen-containing organotin compounds were a useful subclass falling within the class of organotin compounds with which the mercaptoesters described by Chenard et al could be used.

Applicant's have noted that organotin stabilizer for vinyl halide resins are a well-known class of compounds; this proposition is reflected in claim 59 which is a Jepson-type claim, consistent with 37 CFR 1.75(e), and reflected in original claims 1 and 21 of the present application which read:

1. In a method for stabilizing a vinyl halide polymer against heat and light which comprises incorporating a metal-containing stabilizer therein, the improvement which comprises replacing part of the metal-containing stabilizer with an optionally substituted mercaptohydrocarbylene carboxylate.

21. In a method for stabilizing a vinyl halide polymer against heat and light which comprises incorporating a tin-containing stabilizer therein, the improvement which comprises replacing part of the tin-containing stabilizer with a substituted or unsubstituted mercaptoloweralkanol ester of a carboxylic acid containing from 8 to 20 carbon atoms.

and was reflected in claims 1 and 4 of their French priority application which read:

1. Improvement in the stabilization to heat, shock and light of resins containing a halogen, by the addition of one or more metal compounds, which consists in incorporating also into the resin an organic additive having a mercaptan function, characterized in that this additive is an ester of an organic acid, in which the mercaptan function is connected to a carbon atom of the alcohol residue of the ester.

4. Improvement according to any of claims 1 to 3, in which the metal compound is a derivative of tin, antimony, zinc, magnesium or other alkaline earth metal or an alkali metal.

Since 1978, applicants have believed one aspect of their invention to be an improvement in the use of well-known materials as heat stabilizers for vinyl halide resins. Further, there is no basis to believe that the improvement obtained from the mercaptoester would not be obtained with any of the art-recognized organotin stabilizers. Applicants are entitled to the benefit of what would have been obvious to one of ordinary skill in the art at the time the invention was made in view of the sum of all the relevant teachings in the art, and to this end the supplemental declaration of Dr. Foure and the 13 appended references are germane since they illustrate the knowledge of the art with respect to the use of organotin halides as stabilizers. All the evidence cited during prosecution of this series of cases confirms the correctness of applicant's original generic concept.

In In re Johnson and Farnham, 194 USPO 187, 195-196, (CCPA, 1977) the Court stated:

"It is for the inventor to decide what bounds of protection he will seek. In re Saunders, 58 CCPA 1316, 444 F2d 499, 607, 170 USPQ 213, 220 (1971). To deny appellants the benefit of their grandparent application in this case would, as this court said in Saunders;

\*\*\*let form triumph over substance, substantially eliminating the right of an applicant to retreat to an otherwise patentable species merely because he erroneously thought he was first with the genus he filed."

In this application, as in In re Johnson and Farnham, applicant's parent application contains a broad and complete generic disclosure coupled with an example fully supportive of the limited genus now claimed.

Claim 59, in its Jepson structure, addresses the addition of a mercaptoloweralkanol ester of a carboxylic acid containing 2 of 20 carbon atoms, as an additive to an organotin stabilizer.

In application Serial No. 70,503, Example 3, on page 9 of the specification, discloses a mercapto-ethyl stearate additive to a tin stabilizer. Example 4 specifically addresses results secured using a tin stabilizer with the addition of the mercapto-ethyl stearate.

Clearly, the subspecies as outlined by the Jepson format of claim 59, and the affidavits of Michel Foure, and all other supporting affidavits, evidence it was clearly the intent of the parent application (Serial No. 70,503) to disclose an additive, to a broad genus of organotin compounds, which incorporates a mercaptoloweraklanol ester of a carboxylic acid containing 2 to 20 atoms. The broad recitation of the type organotin stabilizer starting material is merely in the preamble and does not bear on the subject matter of what is claimed.

Applicant has narrowed the claims from the broad genus claimed in the parent to a subspecies clearly contained in that genus in this CIP.



It is one, well skilled in the art, who must be able to interpret that it was never intended that their conception exclude particular organotin halides from the scope of their invention. Such is merely a recitation of what is a well known genus of known organotin stabilizers.

Consequently, applicant respectfully requests reconsideration of the Office's refusal to accord applicant benefit of its parent application filed August 28, 1979.

As is supported by a direct decision of the CCPA, it is immaterial why the claims in a case are limited. It is manifestly unfair to prevent an applicant from according them benefit of priority from a parent application which clearly discloses the subject matter of what is a later claimed subspecies.

From the foregoing remarks, it is apparent that priority of applicant's parent application should be accorded to U.S. patent application Serial No. 254,313.

Upon such a grant of priority, cited references, Japanese Kokai 56-2,336 and Japanese Kokai 55-160,044, as well as Kugele (U.S. Patent No. 4,360,619) and Bresser et al (U.S. Patent No. 4,576,984) will no longer be applicable as prior art. In view of the August 28, 1979 date being well before the February 26, 1981 filing date of Kugele or Bresser et al, any issue of an interference with the patent is moot as to the allowability of claims in this application.

In addition, applicant requests reconsideration of the recent rejection of claims 63 and 70 under 35 USC 102 (e) and (g) as being fully met by Bresser et al. Applicants' priority date of August 28, 1979 predates the priority date of Bresser et al by more than one year removing the patent as a reference and obviating the need for an interference.

In light of the above arguments, applicants respectfully requests allowance of claims 59-70.

Respectfully submitted,

by Stewart L. Gitler /  
Stewart L. Gitler, Reg. 31,161

November 10, 1987

(703) 920-1434